#### Calendar of Events

Dec 1	Wed	6:30 PM	SCRA Holiday Potluck Party! Luther Burbank Art & Garden Center, 2050 Yulupa Avenue, Santa Rosa RSVP Required
Dec 3	Fri	7:30 PM	Marin ARC Meeting, Alto Clubhouse, 27 Shell Road, Mill Valley
Dec 4	Sat	10:00 AM	Red Oak Victory ARC Meeting, Point Richmond
Dec 8	Wed	6:30 PM	SCRA Board of Directors Meeting
Dec 15	Wed Wed	7:00 PM 7:30 PM	REDXA Meeting, Carrow's, Petaluma Valley of the Moon ARC Meeting, McDougall Hall, Sonoma Developmental Center, Glen Ellen.
Dec 21	Tues	7:30 PM	Hamilton Wireless Assoc., Bldg 549, Hamilton Field, Novato

Sonoma County Radio Amateurs, Inc. P. O. Box 116 Santa Rosa, CA 95402-0116





RETURN SERVICE REQUESTED
Time Sensitive Material - Please Deliver Promptly

Expires: 03/01/2005

John Breckenridge II 574 Wild Oak Dr Windsor CA 95492

WB6FRZ



**Club Station** 

W6LFJ

# **Short Skip**

newsletter of the

### Sonoma County Radio Amateurs, Inc. P. O. Box 116, Santa Rosa, CA 95402-0116

(707) 579-9608 http://www.sonomacountyradioamateurs.com Repeaters

146.985- • 146.73- • 224.48- • 441.375+



Repeater Station W6SON

December 2004

Volume 29 Number 12



QUA by Brian Torr N6IIY SCRA President

This will be my last article since my term as President is over at the end of this year. I am pleased to see

that we have a full board that will be taking over in January. The new members of the board are John Felton, KE5RI, President; Kevin Alt, K6BSG, Vice President; Rich Freitas, KF6SZA, Secretary; and Bruce Donecker, N6CT, Director. Bill, KH6GJV, has a new role as Director, and Jim, KE6VGV, will continue as Treasurer. I will remain on the board as the immediate Past President.

I was pleased to see that most of the new board members were able to make it to the November board meeting. Traditionally, the December board meeting is the official joint meeting of the old and new boards, but having a joint meeting, albeit unofficial, at the November board meeting should help make a smooth transition.

It looks like the BPL battle is still far from over. Earlier it looked like licensed users, such has hams, would receive some protection from interference. Now, we're being told we can just re-orient our antennas to minimize the interference! Easier said than done! Given how difficult it can be in many communities to erect amateur radio antennas, the concept of moving them to minimize interference is downright scary. We are not talking about a set of rabbit ears on top of the living room TV!

Still, the FCC has placed some requirements on BPL systems that should work in favor of amateur radio. For example, the requirements for certification of BPL equipment and to deal with interference in an expedient manner might be sufficient barriers that a power utility might not even undertake implementing BPL.

I was able to participate in the Simulated Emergency Test (SET) on October 30 that was organized by Rich Freitas, KF6SZA. As usual, Rich did a great job organizing the event. Also as usual, we learned some lessons about message handling. Perhaps most important was to not speak too fast. Although you might be tempted to want to go send messages as fast as possible because you've got a lot of messages piled up, if you have to send a lot of repeats, you might just as well have sent the messages slower to begin with!

I look forward to more SETs; they're great practice and I always learn something. I hope as many of you can participate in them as well.

Lastly, don't forget our Holiday Pot Luck Dinner on Wednesday, December 1 (instead of our normal meeting). The price will be the same as last year, \$7.50 per person. The club will supply the turkey with gravy and ham, and you provide a pot-luck dish (salad, vegetables, side dish, or dessert). By the way, I will be getting bigger dessert plates. Flyers have been sent and you should have received one by now. Please RSVP with your payment by Friday, November 26.

I hope to see you all there!



73, Brian N6IIY

Happy Holidays

1

ARRL DXCC Mgr

SCRA Hotline 707 579-9608	
SCRA E-Mail scra@sonomacount	yradioamateurs.com
SCRA Web Site http://www.sonomaco	untyradioamateurs.com

Chuck Ternes

N6OJ

## **Tuesday Night Net**

Check in to the SCRA net each Tuesday evening on the 146,985-(PL 88.5) repeater at 7:00 PM. Announcements are made of upcoming SCRA and other amateur radio activities in the area and what is listed in Hank's Swap Shop. You will also hear the weekly Amateur Radio Newsline broadcast.

## **Short Skip Advertising Rates**

Business Cards	\$ 12
1 <sup>st</sup> Quarter Column	\$ 13
Each Addn'l Quarter Column	\$ 4
Full page (one side)	\$ 35
Pre-printed inserts (each)	\$ 35
Guaranteed circulation of 150	per month!

For more information, contact the Editor.

### **HUNGRY BEFORE** THE MEETING?

707 763-2528

SONOMA COUNTY RADIO AMATEURS, INC.

JOIN US FOR DINNER! We meet at Coco's restaurant, 1501 Farmers Lane (corner of Farmers & Hwy 12), Santa Rosa, People start showing up at 5:30 PM. No RSVP is required! See you there! (Except December!)



## **NEXT MEETING** December 1st 6:30 PM

## Program:

Holiday Potluck Party

**RSVP** Required (see article)

## **CLUB MEETINGS**

The club normally meets the first Wednesday of each month. This month's meeting will be at:

> **Luther Burbank Art** & Garden Center 2050 Yulupa Avenue Santa Rosa, CA

The meeting starts at 7:30 PM

#### ALL ARE WELCOME!

Please join us at our next meeting. Anyone interested in Amateur Radio may be eligible for membership. A membership application is included in this newsletter.

For more information, contact any SCRA officer, director or member.

Short Skip is published monthly and copyright 2003 by the Sonoma County Radio Amateurs, Inc. Permission to reprint articles is granted provided the source is properly credited. Items printed do not necessarily represent the views of the SCRA or its editors. Letters, photos and articles sent to Short Skip are subject to editing and may or may not be printed.

CONTEST CORNER by Kevin Alt, K6BSG Hello contesters. Happy holidays! Several 160 meter contests this month as well as the third EME contest. Happy DX'ing.

3-5 Dec - ARRL 160 Meter Contest - CW. See:

http://www.arrl.org/contests/rules/2004/160-Meters.html. 2 Dec - Top Band Sprint - CW/SSB. See: http://2hams.net/ARCI/index.htm.

4-5 Dec - ARRL International EME Contest - 50 MHz through 1296 MHz.

See: http://www.arrl.org/contests/rules/2004/eme.html. 4 Dec - TARA RTTY Mêlée - 80-10 meters. See:

www.n2ty.org/seasons/tara\_melee\_rules.html. 4-5 Dec - TOPS Activity Contest - CW, 80 meters. See: http://www.vk4dx.net/contests/tops.htm.

5 Dec - Holiday Spirits Homebrew CW Sprint - 160-10 meters. See: http://2hams.net/ARCI/index.htm.

### CHARLES J. TARR Attorney at Law

WAGVAG REPRESENTING CONSUMERS AND SMALL BUSINESSES, INJURED PEOPLE AND THOSE ACCUSED OF CRIME

411 RUSSELL AVENUE SANTA ROSA, CALIFORNIA 95403 (707) 545-5858

- 11-12 Dec ARRL 10 Meter Contest CW/SSB. See: http://www.arrl.org/contests/rules/2004/10-meters.html.
  - 11-12 Dec 28 MHz SWL Contest coincident with ARRL 10-Meter contest.
  - 11 Dec Great Colorado Snowshoe Run CW, 40 meters. See: www.cqc.org/contests/snow2004.htm.
  - 11-15 Dec North American Meteor Scatter Contest 50, 144. 222. 432 MHz, via meteor scatter. www.ykc.com/wa5ufh/Rally/NAHSMS.htm.
  - 18 Dec OK DX RTTY Contest 80-10 meters. See: www.crk.cz/ENG/DXCONTE.HTM.
  - 18-19 Dec Stew Perry Top Band Distance Challenge CW, 160 meters. See: http://jzap.com/k7rat/stew.rules.txt.
- 18-19 Dec PSK31 Death Match PSK31 and PSK63, 80-6 meters. See: www.mdxa1.org/deathmatch.html.
- 18 Dec Russian 160-Meter Contest CW/SSB. See: www.radio.ru/cg/contest/rule.
- 18-19 Dec Croatian CW Contest 160-10 meters. See: www.qsl.net/ctc/.
- 18 Dec 2 Jan, 2005 Lighthouse Christmas Lights QSO Party - all modes, 160-10 meters. See: http://arlhs.com.
- 26 Dec DARC Christmas Contest CW/SSB, 80-40 meters. See: www.darc.de/referate/dx/fedcx.htm.
- 18 Dec RAC Winter Contest CW/Phone, 160-2 meters. See: www.rac.ca/downloads/canwin2004.pdf.
- 31 Dec 1 Jan, 2005 ARRL Straight Key Night 160-10 http://www.arrl.org/contests/rules/2005/skn.html.

Please Print Clearly		ounty Radio Amateurs, Inc. nbership Application			New [ ] Renewal [ ]		]
Name Call S		Sign License Class		Class			
Address			Hm Phone Wk P		one		
City/State		_ Zip _	E-Mail _			·	
ARRL Member? [ ] Yes [	] No						
Dues & Fees: (SCRA dues year is from 3/1 to 2/28)			Payment Calculat	tions:	Make che	cks payable to SCR	_ A
Individual/Associate Member Family Membership	\$ 24 (\$6.00/qtr) \$ 36 (\$9.00/qtr)		Dues - Full Year (3 Dues -	3/1 to 2/28)		\$	
Under 18 Membership Badge	\$ 12 (\$3.00/qtr) \$ 7		Prorated( Badge Other		/qtr_	\$ \$ \$	
Badge Information Call Sign			Donation			\$	
First Name City			Total  Mail to: SCRA, P.	O. Box 116,	Santa Ro	\$ sa, CA 95402	

SONOMA COUNTY RADIO AMATEURS, INC.

December 2004

## Contesting and Fair Play

### An Editorial by Bill Hillendahl KH6GJV

Growing up I learned from my parents, teachers and coaches that, "it's not whether you win or lose, it's how you play the game." This precept is also embodied in the Amateur's Code published by the ARRL and the Northern California Contest Club's goals as stated by Rusty Epps W6OAT. Both are reprinted in the right column.

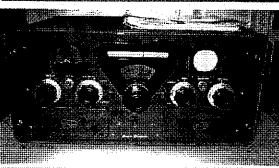
Contesting is just one of the many activities in our hobby. To the old timer and the newcomer, it is an exciting and fun activity. There generally is no great prize at the end, but it is interesting to compare your score with those having similar stations to see how your operation compared.

Contest rules are established to see that everyone is playing the same game and to level the playing field in some contests. If you are operating solo and chose to ignore some of the contest rules, the odds are that you won't be found out. However, it is still cheating.

When contesting as a group or club, it is equally important as the final score to see that all participating members of the event have ample opportunity to operate in the contest. If a "high score at all costs" mentality is conveyed and a hostile, high tension environment is the result, the experience will not be positive to many. Most likely, they won't be back next time and we lose potential contest operators.

A high score in the contest means nothing if the rules are not followed and everyone involved doesn't have a good time.





#### The Amateur's Code

The Radio Amateur is:

SONOMA COUNTY RADIO AMATEURS, INC.

CONSIDERATE...never knowingly operates in such a way as to lessen the pleasure of others.

LOYAL. . . offers loyalty, encouragement and support to other amateurs, local clubs, and the ARRL, through which Amateur Radio in the United States is represented nationally and internationally.

PROGRESSIVE. . . with knowledge abreast of science, a well-built and efficient station and operation above reproach. FRIENDLY. . . slow and patient operating when requested; friendly advice and counsel to the beginner; kindly assistance, cooperation and consideration for the interests of others. These are the hallmarks of the amateur spirit.

BALANCED...radio is an avocation, never interfering with duties owed to family, job, school, or community.

PATRIOTIC. . .station and skill always ready for service to country and community.

The original Amateur's Code was written by Paul M. Segal, W9EEA, in 1928.

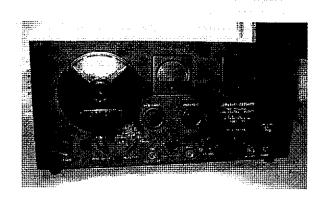
## Goals of Contesting

by Rusty Epps W6OAT of the Northern California Contest Club

- 1. Be a fun event for members:
- 2. Give something of value back to the participants;
- 3. Operate fully within the letter and spirit of the rules:
- 4. Win!

## **SCRA Field Day Results**

Josh Fiden W6XU submitted SCRA's Field Day logs as a 2A class with 11,174 points. This ranked fourth in the contest in the 2A class.



#### SCRA HOLIDAY PARTY

Join us on Wednesday, December 1st from 6:30 PM to ???? for the annual SCRA Holiday Party. The festivities will be held at the Luther Burbank Art & Garden Center, 2050 Yulupa Avenue, Santa Rosa.

Main courses Roast Turkey and Ham (of course) will be provided, along with coffee and tea. AS this is also a pot luck, please bring a dish to share with other members. Salads, a side dish, vegetable, your favorite holiday dish and desserts are more than welcome.

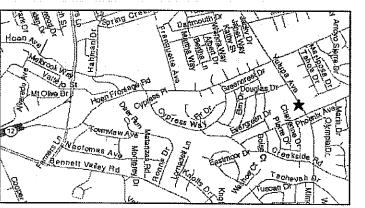
If you wish to imbibe a bit, you are welcome to bring your favorite libation. Wine and the like will go well.......

The cost? Just \$7.50 per person, paid in advance. Please send payment and what side dish you are bringing to: SCRA, P. O. Box 116, Santa Rosa, CA 95402. Please send in your reservation and \$\$ by Friday, November26th. RSVP IS REQUIRED! We have to know how many are coming to order enough turkey and ham.

Ted DeCroff KB6PTA will again be providing musical entertainment and leading the sing along.

Questions? Contact Brian Torr at 575-5871 or e-mail to n6iiy@arrl.net

We'll see YOU and your family on December 1st!



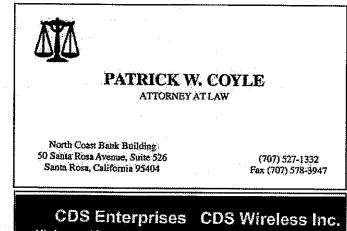
MEETING LOCATION

Luther Burbank Art & Garden, 2050 Yulupa Ave, Santa Rosa (Bennett Valley)

## **ALASKA!**

Have you thought about making a cruise to Alaska? Bill KH6GJV is putting together a cruise for July 2005 on the luxurious Holland America line departing Vancouver BC on July 17, 2005 for Anchorage, AK. The seven day cruise will head north through Ketchikan, Juneau, Skagway, Glacier Bay and on to Seward/Anchorage. Pre and post cruise tours of Vancouver, Victoria and Denali are also available.

Interested? Contact Bill for more details. 707 544-4944 or kh6gjv@arrl.net (This is not an SCRA or ARRL sponsored event.)





Are you a budding author? Write an article for *Short Skip* on a Ham radio-related subject, technical or non-technical. E-mail the article to kh6gjv@arrl.net. We'd love to see YOU in print!

PARTS PROFESSIONALS // WHOLESALE-RETAIL // NO REPAIRS

BASHAM'S ELECTRONIC SUPPLY
345 West College Ave., Santa Rosa, CA 95401

Mon.- Fri. 8:00-5:30
Saturday 9:00-12:00
Sunday Closed

Steve Basham
OWNER Fax (707) 527-6000
(800) 675-7557
Fax (707) 527-1368



### **ARES Comm Log**

by Rich Freitas KF6SZA Sonoma County District **Emergency Coordinator** 

#### Acronyms

#### SET

On October 30th, Santa Rosa Area ARES was activated when a light plane on final approach to Charles Schulz Airport crashed into the high voltage power lines north of Ursuline High School causing fires and a power outage. If you didn't hear about this emergency and the subsequent evacuation of the area into shelters, it's probably because you didn't participate in the ARES SET (Simulated Emergency Test). Net Control was established at the permanent radio facility at Blood Bank of the Redwoods and ARES members were stationed at Memorial Hospital, Sutter Hospital, Veteran's Memorial Bldg. Shelter, CDF Command, and the Salvation Army Canteen. We all met at "Mickey-D's" for a pre-event briefing where participants were handed a sealed envelope and dispatched to their locations. Upon arriving at their posts, the envelopes were opened and the exercise scenario was revealed. For the next two hours, messages were passed and the disaster was handled. Following the exercise, we all got together for a critique session to discuss what we'd learned and how to improve our skills. The beer and pizza wasn't bad, either. Thanks to Ron, KG6KTP; Craig, KG6THE; Jeff, KK6JAB; Jim, W6ESJ; Brian, N6IIY; Bill, KH6GJV; and Fred, KQ6OB for their participation.

#### BBR HF OK

On November 4th, the HF station at Blood Bank of the Redwoods was initiated for a statewide Blood Bank net on 40 meters. Bill. KH6GJV, manned the station and contact was made with six California Blood Bank stations from Eureka to San Diego. According to Bill, reception was excellent - now, maybe, the snickers will die down from those who have made comments about the antenna that was placed on the roof. All-in-all, the multi-band vertical antenna seems to perform MUCH BETTER than the dummy-load it was thought to be!

#### **EMSA**

On November 18th, ARES members participated in the statewide EMSA (Emergency Medical Services Authority) drill from the Blood Bank of the Redwoods. Conducted on an annual basis, this drill incorporates an emergency scenario designed to coordinate communications between the various hospitals and other medical facilities in California. This particular exercise included a mock outbreak of botulinum; also included in the drill was a "loss of telephone service" which forced the establishment of communications via amateur radio. Thanks to Bill, KH6GJV; Brian, N6IIY; Dave, W6IBC; Fred, KQ6OB; and Jeff, KK6JAB for taking the time to participate in this effort.

#### WWINLINC

From the November issue of the EmComm Monthly newsletter by Dave Thorne, K6SOJ:

The World Wide International Network of Landline Idealistic Nerds and Cyberoperators, Inc. proudly announced their WWINLINC 2005 Contest Awards Program.

#### Award Categories:

wwcce: work 100 counties via email wwdxe: work 100 countries via email

work 100 email stations in 100 counties using wwccm:

mobile email

wwdxm: work 100 email stations in 100 countries using mobile email

wwdx10-10: work 100 dx email stations 10 times each (each e-station must use each of 10 different email aliases.)

#### Other rules:

- 1. no radio or other wireless contacts may be used to solicit email stations (this includes Amateur Radio, GMRS, FRS, CB, etc.)
- email contacts must be printed out and saved for one year in the event the judges wish to verify
- 10 bonus points for each email done on a battery or solar powered computer
- 4. 1 bonus point for every spam message deleted within 5 seconds. (spam ads for ciagra, vitallus, letvita, hot chicks, and the bank of mogodogoo are exempt)
- 10 bonus point for every email message that actually has some redeeming value.
- 1 bonus point off for every mispelled word
- 7. 10 bonus points for every time your computer locks up during an email contact and you reconnect with the other e-station within 10 minutes
- cell phone output power for mobile email is permitted but limited to 500 milliwatts
- no outside or roof-top cell phone antennas
- 10. 100 bonus points for non-laptop mobile 110 VAC computers with CRT using a dynamotor for power
- 11. 100 bonus points if you make all contacts on the boss' time using a company computer
- 12. 100 bonus points if the internet goes down while you are
- 13. 100 bonus points if all contacts are made using a "vintage" computer (over 2 years old)

## Happy Thanksgiving!

The weekly ARES net for the greater Santa Rosa area is conducted on Mondays at 7:30 pm on 146.985 MHz, - offset, 88.5PL. All ARES members and guests are invited to check-in. Please join us.

#### Sonoma County Radio Amateurs, Inc. Membership Meeting, November 3, 2004

## MINUTES

SONOMA COUNTY RADIO AMATEURS, INC.

- Call to Order, Verification of Quorum The meeting was called to order by President Brian Torr, N6IIY, at 7:38 pm at the Luther Burbank Arts and Garden Center.
  - a) Introductions
    - Officers & Directors The club officers and directors introduced themselves.
    - Program Introduction Boatanchor Night
    - Visitors There was one visitor, Chris
    - iv) New Calls and Upgrades None
- Approval of Minutes It was moved and seconded by Pat, KG6JSL, and Kevin, K6BSG, that the minutes as printed in Short Skip be approved. The motion passed.
- Officer and Director Reports
  - President Brian, N6IIY, had nothing to report
  - Vice President Position open.
  - Secretary Position open.
  - Treasurer Jim, KE6VGV, reported that there has been no change to the account balances. .
  - Directors -
    - Randy, KE6VMZ was absent
    - Gregory, AC6VJ, had nothing to report
  - Past President KH6GJV, had nothing to report Committee Reports
- a) ARES -Rich, KF6SZA, reported the SET that was held on October 30 and the upcoming EMSA drill on November 18.
  - b) Mobile Comm Van No report.
  - Activities Committee -Brian, N6IIY, reported on the plans for the Holiday Pot Luck Dinner on December 1.
  - d) Newsletter Editor Bill, KH6GJV, reported that he has made progress reducing the pdf file of part of the newsletter..
  - Public Service No report
  - Repeater Committee -
  - Status of repeaters Greg, AC6VJ, gave an update on the status of the repeaters
  - ii) Net Control Volunteers 12/7 Greg, AC6VJ, 12/14 -Craig, KG6THE; 12/21- John, KE5RI; 12/28 - Open
- Unfinished Business None New Business -
- Nominations for board positions were made as follows:
  - President John Felton, KE5RI
  - Vice President Kevin Alt, K6BSG
  - Secretary Rich Freitas, KF6SZA
  - Treasurer Jim Lee, KE6VGV
  - Directors Bruce Donecker, N6CT; Bill Hillendahl, KH6GJV, and Josh Fiden, W6XU

It was moved and seconded that the nominees for President, Vice President, Secretary, and Treasurer be elected. The motion passed. Ballots were distributed to vote for the two positions for Directors. Bruce, N6CT, and Bill, KH6GHV, were elected.

- Member Biography None
- Show & Tell None
- Recess There was a break from 8:20 pm to 8:35 pm
- Program Several members told us about the "boat anchors" they brought. John, KE5RI, brought the most boat anchors and the heaviest.
- Raffles None
- Announcements
  - a) The December meeting will be the Holiday Pot Luck Dinner. \$7.50 gets you turkey with gravy and ham, plus bring a salad, side dish or dessert for pot luck.
  - b) SCRA Board of Director's meeting will be 6:30 pm, November 10, at Marie Callendar's.
- Adjournment The meeting was adjourned at 9:24 pm.

Sonoma County Radio Amateurs, Inc. Board of Directors Meeting, November 10, 2004 MINUTES

Board Members Present: Brian Torr, N6IIY; Jim Lee, KE6VGV; Gregory Gordon, AC6VJ; Bill Hillendahl, KH6GJV

Guests Present: Rich Freitas, KF6SZA; John Felton, KE5RI, Kevin Alt, K6BSG, Pat Coyle, KG6JSL

- 1) Call to Order, Verification of Quorum, Introductions. The meeting was called to order by President Brian Torr, N6IIY, at 6:39pm. The meeting was held at Marie Callendar's, 2460 Mendocino Avenue, Santa Rosa. A quorum was present in that four of the seven voting board members were present.
- 2) Approval of Minutes Greg, AC6VJ, moved that the minutes of the 10/13/2004 board meeting be approved. The motion passed.
- 3) Officer and Director Reports
  - a) President Brian, N6IIY, had nothing to report
  - b) Vice President Position Open
  - c) Secretary Position Open
  - d) Treasurer Jim Lee, KE6VGV made a motion that the \$2000 check from the SRCC be deposited in the savings account, rather than the checking account. The motion passed.
  - - i) Randy, KE6VMZ was not present ii) Gregory, AC6VJ had nothing to report
- f) Past President Bill, KH6GJV had nothing to report 4) Committee Reports
- a) ARES Rich, KF6SZA, reported on the SET on October 30 and the upcoming IMSA drill on November 18.
  - b) Mobile Comm Van The Toaster may get painted soon. We need to look for a new home for it.
    - i) Activities Committee Brian, N6IIY, reported on the plans for the Holiday Pot Luck Dinner on December 1.
  - c) Newsletter Bill, KH6GJV, reported on his progress to reduce the size of the .pdf of part of the newsletter.
  - d) Public Service A subcommittee will be formed to discuss the needs for a net control station in a box.
  - i) VE Liaison Still looking for a place for upcoming test
  - e) Repeater Committee Gregory, AC6VJ
    - i) Net Control volunteers Brian, N6IIY, agreed to be NCS for
    - ii) Status of the repeaters Greg reported on the status of the club's repeaters.
    - iii) SCRA vs NARCC Update Discussion was held regarding the litigation.
- 5) Unfinished Business None
- 6) New Business It was moved and seconded that Bill, KH6GJV, dispose of the old club computers; he was not able to sell any at the meeting the previous week.
- 7) Future Programs No discussion
- 8) Adjournment The meeting was adjourned at 8:48 pm

If you are not getting the ARRL San Francisco Section news by e-mail and you are an ARRL member, be sure to subscribe under your Members Only information or go to http://www.arrl.org/sections/?sect=SF or http://www.pdarrl.org/sfsec/



## HSC Web Specials!

The items below can be found in the "Specials" area of our online shopping pages at www.halted.com...check them out and use our secure site to place your order for the holidays!

\$17.50

\$3,95

Fujitsu FPG-310 Color Pen Plotter GPIB (IEEE-488) interface Boxed, w/ manual, cord, 90-day warranty HSC# 19131 \$47.50

Rechargeable 12VDC Battery 40 AH, lead/acid, Yuasa NPX-150R HSC# 18917 \$2

Server Cabinet, ATX rack mount, with lower Supply, White colo HSC# 60541 New Price! \$179.95

Battery charger, NiMH

SCSI Controller, Initio, PCI Bus HSC# 18218 New Price! \$9.95

SCSI Controller, Adapted 1505, ISA Bus HSC# 17995 New Price! \$7,50

Mouse, 2-button HSC# 18731

Mouse, w/ numeric keypad HSC# 80539 \$4,95

Scrolling mouse, translucent body \$9,50

Computer Power Supply, ATX 200W, "Mini-Tower"-style HSC# 18665 New Price! \$14.95

National designation

Sesgale ST I5 ISON 4.3 GB 'Barracusa' SCSI

• 7,200 RPM, 8,0/9 0 ms avg. seek bme

Standard 50-pin SCS(
3 5" size, half-height (1.5" tall)

21 Hds, 11 Disks, 3,711 Cyl.

HSC# 18412

Seagate ST19171WC, Ultra-SCSI Wide ASA2
 Formatted capacity: 9.1GB

Spindle speed: 7200 RPM.

HSC# 18753

Disk Drive Deals!

Computer Power Supply, ATX, 145W HSC# 18350 \$9,

etwork card, ISA bus, 10-Base T HSC#18943 Computer Speakers, powered HSC# 18662 59.95

ad, Microsoft "Sidewinde: HSC# 80486 \$12.50

Compact AC Inverter for the car, 100W HSC# 19021 New Price!

Motherboard, 4%6DX1AT HSC# 18529 New Price!

otherboard, Baby AT, 486VLB HSC#19003 59.95

Multimeter, analog, VOM HSC# 18260 \$9.95

Multimeter, DMM, with transistor check HSC#80370

Multimeter, DMM, tilt-up display, nice! HSC#80504 \$39,95

Computer Joystick, "FX2000" HSC#.18772 New Price! \$3.00

Tower Chassis , 7-Bay \*RAID\* HSC# 80544 \$42.50

PCMCIA Goodies!

Compatible with notebooks/PCs with Type II stol

No jumpers or switches - Two LEO status lights

New borod, diskette & manual, 90-day warrants

MBLA1600 LANcard supports 10BaseT/100BaseT Full duples support (10kthps networks only)

Ethernet Specs: IEEE 802.3 & 802.3u spec

Epson/Adaptec APA460B PCMCIA SCSI Card
 Up to 2 MByte/sec PC Card bus rate

New, OEM pack with DBZ5 cable,90-day

\$9.95

\$39.50

\$49.50

EPSON Etherest POMCIA interface card

Hot card insertion and removal - no por

HSC# 19125

HSC# 19190

HSC# 19160

#### VHS Video To Go!



- Videotronics' Medei No. VHS-10'S plants time Dual power option! 110'MC or 12'VDC' Parfect for enter taining the Mrts in the sen! All ny other uses, home, business, camping Standard NTSC VHS format, fold front-panel controls, soft-busch buttons with LEU's

HSC# 19048 \$19.95!

#### VHS for even less!



- Magnavia Model No VR3100AI01 video player Stendard F type connectors for wine connect. Plar panel awith selects Ch. 3 or Ch. 4 output ICC jacks for line level videolaxis connect. Pulled from working ser vice. Units have slight makings from removed intared transmit attems conversing from panel infarred desector. Remate NOT included.

HSC# 19152 \$17.50!

#### **EASY NETWORK!**

Multi-PC Web Access... Save Money! Up to 4 PC's on one phone line!

Share printers, send faxes, backup-files Proxy server for multi-PC internet acces Only one phone line needed for ISP con

#### HSC# 80599 \$29.95

or, you can just buy the modernmet-hub card!
Comes with installation software CD
You can connect your own 16-BaseT network PC's
(up to three) to its hub and save!
OEM package, new, 90-day warranty.

\$17.50 HSC# 18942 Makiti i presidi biranja sa rupje i jeje

#### External CD-R/W!



- the just like a floppy! Shares printer port
- Drag & drop up to 650MB on a single CD! 2X write on CD-RAW, up to 6X read on CD-R
- 1X RVW-150KB/sec, 2X RvW.300KB/sec
- 6X Read: 900KB/sec drivers avail, at HP i EIDE-(ATAPI) interlece w/MMC, front tray load
- 74 min on 120mm disk, 21 min with 80s
- HSC# 19036

\$49.50

#### Lab Bench Supply!

- Model No. AEEC-350, 0-50VDC @3 Amp
- 110VAC, 60Hz 150VA -- amail (octorint)
- Dual digital meters for voltage and curren
- e. New, IEC power cord, manual, 90-day warran

HSC# 80606

#### Variable Transformers!

- One of the chost useful instruments on your bench
- Two sizes to choose from, now they're all
- Both new in box, made in China Model AEEC-SSOVA
- 0 120 VAC puput, 500 VA
- Measures 6.5" x 9" x 7" tall

HSC# 80474

\$45.00

Model AFEC-2090VB

Measures 8" x 10" x 9.5".

HSC# 80461

\$95.00 **Billion multiply** 

#### Solder Pots!

mally...we found a source for solder pois! New ley HSC warranty, very handy for the workben

- AEEC-10P handy compact desktop unit
- 110VAC, \$10 Watts perfect for small inhe

HSC# 80610

# Electronic

\$ 39.95

Toll Free (Orders Only) 1-800-4 HALTED (1-800-442-5833) World Wide Web: http://www.halted.com

3500 Ryder St. Santa Clara, CA 95051

408-732-1573



4837 Amber Ln. Sacramento, CA 95841 916-338-2545

5681 Redwood Dr. Rohnert Park, CA 94928 707-585-7344



yet? You owe it to yourself to come see our constantlychanging, mind-boggling array of electronic parts, equipment, computers, and scientific gear! Find out why knowledgeable engineers, technicians and hobbyists make HSC their first stop for all their techno-shopping needs!

For over 35 years, HSC has been your best source for

high-tech goodies from Silicon Valley! Haven't visited us

Terms: Some quantities limited: all items are subject to prior sale. Minimum order: \$10.00 plus shipping. Orders under \$20.00 subject to \$2.00 handling lee, [naddition to shipping. All orders shipped FOB Santa Clara, CA (this means you pay freight!) by UPS Surface (no P.O. Boxes) unloss otherwise specified, in which case prevailing carrier rate plus S5.00 handlinglee may apply. Prepaid orders that don't include shipping charges will be shipped freight COD. There is a \$6.00 UPS charge added to shipping charges for COD shipments. If you have questions about your order, please call Customer Service at (408) 732-1854 M-F 9AM to SPM PST.

ANAHEIM, CA (Near Disneyland) 933 N. Euclid St., 92801 (714) 533-7373 (800) 854-6046 Janet, KL7MF, Mgr. anzheim@hamzzeio.com

BURBANK, CA 2416 W. Victory Bt., 91506 (818) 842-1786 (800) 854-6046 Èric, KAGIHT, Mar Victory Blvn. at Buena Vista 1 mi, west 1.5 burbank@hamredio.com

OAKLAND, CA 2210 Livingston St., 94506 (510) 534-5757 (899) 854-6946 Mark, WIZYN, Mgr. 1-880 at 23rd Ave ramp cakland@hamradio.com

SAN DIEGO, CA 5375 Kearny Villa Rd., 92123 (958) 560-4900 (308) 854-6046 Forn, KMEK, Mgt. Hoy, 163 & Claremont Mesa sandago@haairadio.com

SUNNYVALE, CA 510 Lawrence Exp #162 94085 (408) 736-9496 (800) 854-6046 Howard, KE6PWH, Mgr. So, from Hwy, 101 sunnyvale@hamradio.com

**NEW CASTLE, DE** (Near Philadelphia) 1599 M. Dupont Hwy., 19720 (302) 322-7092 (300) 644-4475 Jim, KABLEL, Mgr RT.13 1/4 sri., So. I-295 newcastle@hamradio.com

PORTLAND, OR 11705 S.W. Pacific Hwy 97223 (503) 598-0555 (800) 854-6846 Leon, N7IXX, Mor. ligard-99W exit from Hwy, 5 & 217 pniffend Whankadio.com

DENVER, CO 8400 E. Hiff Ave. #9, 80231 (303) 745-7373 (889) 444-9476 Joe, KDOGA, Mgr. John, NSEHP, Mgr. denver@hamraelo.com

PHOENIX, AZ 1939 W. Dunlap Ave., 85021 (602) 242-3515 (800) 444-9475 Gary, N7GJ, Mgr. 1 mi. east of I-17 phoenix⊛hamradic.com

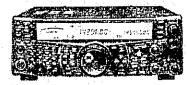
ATLANTA, GA ATLANTA, GA 6071 Buford Hwy., 30340 (770) 263-0700 (800) 444-7927 Mark, KJ4VO, Mgr. Doravile, 1 mi. no. of 1-285 atlanta@hamradin.com

WOODBRIDGE, VA (Near Washington D.C.) 14803 Build America Dr. 22191 (800) 444-4799 Steve, N45R, Mgr. Exit 161, 1-95, So. to US 1 woodbridge@hamradio.com

SALEM, NH (Near Boston) 224 N. Broadway, 03079 (603) 898-3750 (800) 444-0047 Chuck, N1UG, Mgr. sales@hamradro.com Exit 1, I-93; 28 mi. No. of Boston salem@hamradio.com

#### B G





TS-2000 HE/VHE/UHE TOVE

• 100W HF, 6M, 2M • 50W 70CM 

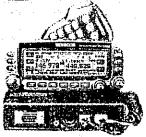
Low Intro Price!



TH-D7A(G) 2M/440

- 2M/440 Dual Band Built-in 1200/9600 Baud TNC
   APRS Compatible
- DX Packet Cluster Monitor
   200 Meins., CTCSS
- VC-H1 Massaging Control

Low Pricing!



TM-D700A 2M//440 Dualband

- 50w VHF 35w UHF Opt Voice Synthesizer
- Receives 118-1300 mHz (cell blocked)
- Remote Head first, only (kit included)
   200 Meniories Built in 1200/9600 band TNC
   Advanced APRS Features

- Dx Packet Cluster
   Tone Scan GPS/VC-H1/PC Ports

OAKLAND, CA 2210 Livingston St., 94606

(510) 534-5757 (800) 854-6046 Mark, WI7YN, Mgr.

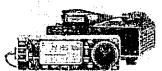
1-880 at 23rd Ave. ramp oakland@hamradio.com

SUNNYVALE, CA

for March Control of the Avenue Avenue Avenue Avenue

510 Lawrence Exp. #102 94085 (408) 736-9496 (800) 854-6046 Howard, KE6PWH, Mgr. So, from Hwv, 101 sunnyvale@hamradio.com

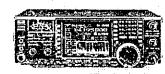




IC-706MKIIG HE/VHF Transceiver

- All mode HF/6M/2M/70CM
   100W HF/6M, 50W/2M, 20W/443 MHz
   AF-DSP Plug and Play Filters No Soldering
   Easy-to-Navigate menues

Low Pricing!



IC-756 PRO II All mode Transcerver

- 159-5M @ 100W Enhanced Ry performance
   32 bit IF DSP SSB/GW Synchronous turning
   Enhanced 5 inch bofor TFT w/spectrum scope
   Selectable IF filter shapes for SSB & GW
   Multiple DSP controlled AGC loops
   Advanced CW functions
   101 alphanumeric memories

The Ultimate Radio!

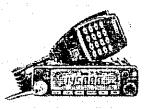




**DJ-196T** 2M/HT

- 5 Watt out 40 memories
- · Alphanumeric display • CTCSS + DCS built in
- Auto Dialer

Low Pricing!



DR-135TP 2M mobile

- 50 Watt out \* Alpha numeric display
   100 mems \* Built-in TNC 1200 & 9600 Baud
   Front Panel GPS in \* Rear DB-9 port
   CICSS/OCS Encode/Decode built in

Low Pricing!



YABSÜ





VX-7R

- Wideband RX
   900 Memories
- 5W TX (300mw 220Mbz)
- Li-lon Battery
- Fully Submersible to 3 ft.
   Built-in CTGS3/DCS
   Internet WIRES compatible

**Great Price!** 



FT-1000 HF/6M/2M/70CM Trans.

- · Compact Transceiver w/detachable
- front gane!
- Rx 100kHz to 970mHz (cell blocked)
   Ix 160W 160-6M, 50w 2M, 20W 700M
- Built-in DSP, Vox, CW keyer
   200 Memories

Low Pricing!



FT-1000MP MKV HF Trans.

- · Enhanced Digital Signal Processing
- Dual BX
- Dear HA
   Collins SSB filter built-in
   200W, External power supply

Low Pricing!